



AKR1

200m2 Waiting Room Hearing Loop Kit



Overview

Includes a PDA200E hearingloop amplifier and APL line level audio inputplate (for connecting to a paging system) and 6m of Belden cable.

Ideal for creating a high quality hearingloop system for a waiting room.

Wall-mountable PDA200E amplifier capable of driving a perimeter loop of up to 200m2.

Internal drive, level and metal compensation controls.

Two balanced / unbalanced line level inputs.

One microphone input with 12V phantom power for electret microphones.

Full compatibility with the Outreach plate audio input extension system.

Fully compliant with BS EN 60118-4 when correctly installed.

Loop cable not included-use our LOOP2W1mm2 cable or download our AFILS loop calculator from our Software & Apps page for more precise recommendations.

Technical Specifications

Type	Wall mounting. Requires fixed Mains wiring.
Coverage	200m2 approx.
Mains supply	230V 50/60Hz.
Auxiliary inputs	1 Microphone and 2 x Line/Outreach screw connectors (on PDA200E).
Indicators	Input level; loop current meter (peak 3, 2, 1); compression; power on.
Controls	Input level; loop drive, metal compensation.
Product dimensions (mm)	W 271 x H 200 x D 77mm (amplifier only).
Construction & finish	White painted steel (PDA200E); plastic (APL).
IP Rating	IP20.
Weight	2.9 kg (amplifier only).
Operating conditions/temperature	-5°C to +40°C. Max relative humidity: 95%.
Kit contents	PDA200E 200m2 hearing loop amplifier; APL line level audio input plate; 1 x 6m Belden cable; Loop Fitted sticker. Loop cable IS NOT included.



PDA200E

WALL MOUNTING INDUCTION LOOP AMPLIFIER

- ▶ Ideal for meeting rooms, lecture theatres, churches, schools, TV lounges, shops and other small to medium sized applications
- ▶ Provides max. square room coverage of 120m² (11m x 11m) or max. rectangular room coverage of 250m² (10m x 25m)
- ▶ Straightforward internal screw connectors
- ▶ Wall mountable for permanent installation – ideal for schools and colleges where rooms are often left unsupervised
- ▶ Internal tamper-resistant drive, level and tone controls
- ▶ One balanced/unbalanced microphone input
- ▶ One balanced/unbalanced line level input
- ▶ Alert tone switch input for doorbells, fire alarms, security systems, etc
- ▶ 100V line input for PA system connection
- ▶ Fully automatic compressor-limiter
- ▶ Full 2Ω drive capability for increased coverage at higher frequencies
- ▶ Compatible with SigNET's unique 'outreach plate' input extension system
- ▶ Available in a variety of kit formats to suit a host of typical loop installations
- ▶ Fully compliant with EN60118-4 (formerly BS6083) and BS7594:1993



The PDA200E has revolutionised the induction loop marketplace by bringing the ability to understand, install and appreciate the technology involved to a whole new client base.

Straightforward internal screw connectors and preset controls mean no specialist audio experience or audio connectors are required. By following the simple set-up procedure, no further adjustments are necessary, allowing a top quality assistive listening system for the hard of hearing to be set-up in its entirety by new and experienced installers alike.

No less than four easy-to-access inputs are provided:-

- ▶ Balanced/unbalanced mic (with phantom power for use with electret mics).
- ▶ Balanced/unbalanced line (for the connection of TV and other audio feeds).
- ▶ Alert tone switch (a tone generator for use with doorbells, fire alarms, etc).
- ▶ 100V line (for the connection of PA system audio feeds).

The amplifier's state-of-the-art current drive audio processing circuitry includes an automatic compressor/limiter which maintains the loop signal within a small dynamic range to improve intelligibility. Manual adjustments can also be made using the amplifier's internal tamper-resistant drive, level and tone controls, allowing the system to be tailored to suit the exact requirements of any room.



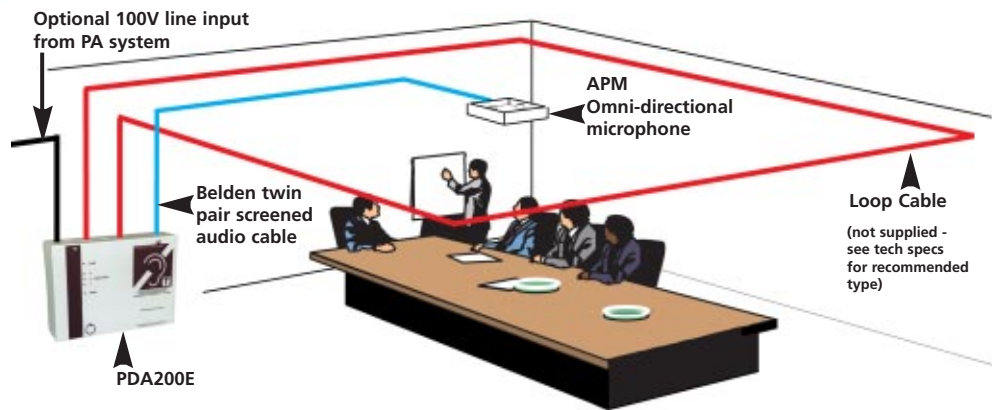
For ease of specification and installation the PDA200E is available on its own or in the following kits formats:-

- ▶ AKM1 Meeting/seminar room kit
- ▶ AKR1 Waiting room kit
- ▶ AKT1 TV/Music lounge kit
- ▶ AKW1 Place of worship kit 1
- ▶ AKW2 Place of worship kit 2
- ▶ AKH1 Heath and fitness club kit
- ▶ AKL1 Lecture room kit
- ▶ AKU1 Retail unit kit

(the exact contents of each kit are listed overleaf)



A typical PDA200E meeting/seminar room installation using items supplied in our AKM1 kit



POWER REQUIREMENTS

Mains voltage	230V ac
Power consumption	<80VA
Fuses	Internal mains input fuse 1A 20 mm (HRC)

The PDA200E requires fixed mains wiring fed from a 3A fuse spur located no more than 3m from the amplifier.

INPUTS

Three 5mm screw connector inputs are available - mic., line & 100V. If more than one is used, the signals are mixed

MICROPHONE	
Input impedance	600Ω balanced/unbalanced
Sensitivity	2-5mV (-46db to -50db)
Phantom	12V
LINE	
Input impedance	>10kΩ balanced/unbalanced
Sensitivity	0dbv (300mV rms to 1.5V rms)
100V LINE	
Input impedance	200kΩ
Sensitivity	+40dbv

ALERT Closing a volt-free switch across this input generates a 2kHz tone through the loop.

Should additional inputs be required, the PDA200E is compatible with SigNET's outreach plate input extension system. This allows up to ten extra mic or line level inputs to be daisy-chained to the PDA200E. See our separate datasheet for details.

OUTPUT

Type	Current mode
Loop connector	Screw connector
Cable	1.0-2.5mm ²
Loop coverage (square room)	120m ² max. (e.g. 11m x 11m)
Loop coverage (rectangular room)	Up to 250m ² when shortest side of loop is no greater than 10m (e.g. 10m x 25m)
Loop drive current	4A peak; 1.8A average
Loop impedance	0.2 to 2Ω @ 1kHz

PERFORMANCE

Bandwidth	40Hz to 8kHz
Input dynamic range	36dB
Distortion	<0.5% THD

The PDA200E includes an amplitude compression stage that limits overload and has a dynamically variable ratio from 1:1 to 10:1

INDICATORS & CONTROLS

LED indicators	Input peak (limit); output drive (1,2,3 peak current); power on (power)
User controls	One level control, adjustable between -35dB to +0dB for both line and microphone One output drive control, giving a loop current adjustable between 40mA & 2.1A One mid-range cut & boost tone control (frequency = 1kHz; cut= -17dB; boost = +17dB)

DIMENSIONS & WEIGHT

Width x Height x Depth / Weight	273 mm x 200 mm x 77 mm / 2.9kg (unpacked)
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PDA200E KIT VARIANTS

AKM1 Meeting/seminar room kit	1x PDA200E and 1x AMP Omni-directional plated microphone.
AKR1 Waiting room kit	1x PDA200E and 1x APL outreach plate (for the connection of paging systems).
AKT1 TV/music lounge kit	1x PDA200E, 1x AMH handheld microphone c/w APJ outreach connection plate and 1x APS scart to dble phono lead c/w APL outreach plate (for the connection of TVs, etc)
AKL1 Lecture room kit	1x PDA200E, 1x AMT tie/desk microphone c/w APJ outreach connection plate and 1x AML lectern microphone c/w APJ outreach connection plate.
AKW1 Place of worship kit 1	1x PDA200E, 1x AML lectern microphone c/w APJ outreach connection plate and 1x APL outreach plate (for the connection of audio inputs from CD, tape decks, etc).
AKW1 Place of worship kit 2	1x PDA200E, 1x AMR radio microphone c/w APQ outreach connection plate and 2x APXM outreach plate (for the connection of existing microphones)
AKU1 Retail Unit kit	1x PDA200E and 1x AML lectern microphone c/w APJ outreach connection plate.
AKH1 Health and fitness club kit	1x PDA200E, 1x AMR radio microphone c/w APQ outreach connection plate and 1x APL outreach plate (for the connection of CD/tape decks, etc)